REDDI FACTS

Air Conditioner
Model: TTD730B100A1

Library	Service Literature
Product Section	Unitary
Product	Split System-Air Conditioner
Model	TTD
Literature Type	Service Facts
Sequence	1
Date	February 1989
File No.	SV-UN-S/S-TTD730-SF-1- 2/89
Supersedes	New

IMPORTANT — This document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

PRODUCT SPECIFICATIONS

OUTDOOR UNIT	TTD730B100A1
PWR. CONNS. — V/Ph/Hz	200-230/1/60
Min. Brch. Cir. Ampacity③	24
Br. Cir. Max. (Amps)	40
[illegible] (Amps)	40
COMPRESSOR	Climatuff™
No. Used — No. Speeds	1 — 1
Volts/Ph/Hz	200/230/1/60
R.L. Amps — L.R. Amps	16 — 69
Br. Ckt. Sel. Cur. Amps.	18
OUTDOOR FAN — Type	Propeller
Dia. (in.) — No. Used	18 — 1
Type Drive — No. Speeds	Direct — 1
CFM @ 0.0 in. w.g.④	2262
No. Motors — HP	1 — 1/5
Motor Speed R.P.M.	1075
Volts/Ph/Hz	200-230/1/60
F.L. Amps	1.7
OUTDOOR COIL — Type	Spine Fin™
Rows — F.P.I.	1 — 24
Face Area (sq. ft.)	10.89
Tube Size (in.)	3/8
REFRIGERANT	
Lbs. — R-22 (O.D. Unit)⑤	4 lbs. - 5 oz.
Factory Supplied	Nom.
Line Size — in. O.D. Gas⑥	3/4
Line Size — in. O.D. Liq.⑥	5/16
DIMENSIONS	H x W x D
Outdoor Unit — Crated (in.)	24⅞ x 30¹⁄₁₆ x 26½
WEIGHT	
Shipping (lbs.)	161
Net (lbs.)	153

OPTIONAL EQUIPMENT

Evaporator Defrost Control Kit
Needed For Cooling Operation between 55° and 40° AY28X079
Hot Water Bank BHW009B100A
Muffler For Hot Water Bank BAY41X219
Coupling Kit — 3/4" Tube
(90° Bend) Size —11 Coupling,
5/16" Tube —6 Coupling BAY71X011A
Coupling Kit — 3/4" Tube
—11 Coupling, 5/16" Tube
—6 Coupling BAY71X012A
Quick Start Kit (Plug-In) BAYKSKT250

TUBING INFORMATION

Tubing Sizes		Tubing	Additional
Suction	Liquid	Length	Refrigerant
3/4"	5/16"	15'	2 oz.
3/4"	5/16"	25'	7 oz.
3/4"	5/16"	32'	10 oz.
3/4"	5/16"	40'	13 oz.

Tubing lengths in excess of forty (40) feet use the following amount: 3/4" and 5/16" uses 4 oz. per each 9 ft.

③Calculated in accordance with Natl. Electric Code. Suitable for use with HACR circuit breakers or fuses.
④Standard Air — Dry Coil — Outdoor.
⑤This value approximate. For more precise value see unit nameplate and service instruction.
⑥Max. linear length 80 ft; Max. lift-Suction 60 ft; Max. lift-liquid 60 ft. Max. length of precharged tubing 40 ft. For greater length refer to Refrigerant Piping Manual Pub. No. 22-3040.

SAFETY NOTICE

THIS INFORMATION IS INTENDED FOR USE BY INDIVIDUALS POSSESSING ADEQUATE BACKGROUNDS OF ELECTRICAL AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A CENTRAL AIR CONDITIONING PRODUCT MAY RESULT IN PERSONAL INJURY AND OR PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

RECONNECT ALL GROUNDING DEVICES

ALL PARTS OF THIS PRODUCT CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, CLIPS, NUTS OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE, THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

DISCONNECT POWER BEFORE SERVICING

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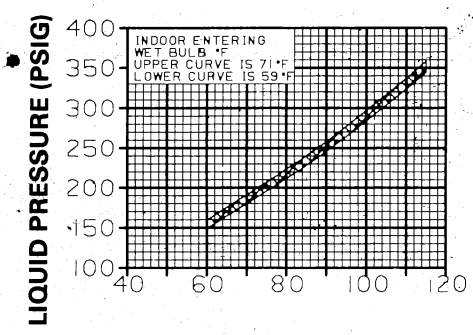
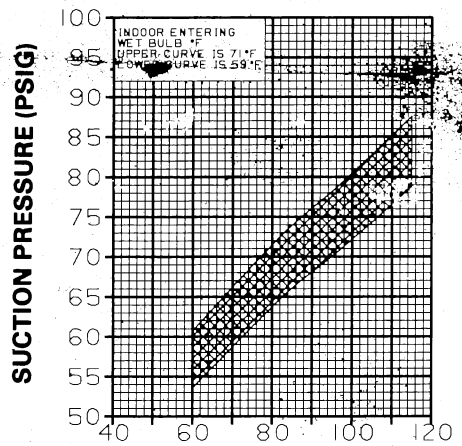
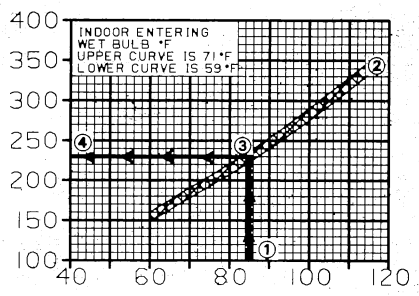
PRESSURE CURVES — TTD730B100A1

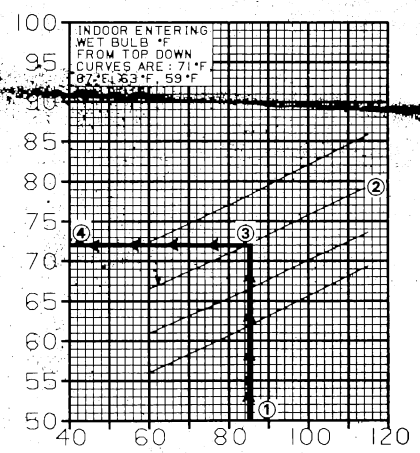
TXC030B4HPA
Cooling with FCCV or Capillary tubes





BWV030P100E
Cooling with Thermal Expansion Valve





COOLING PERFORMANCE TO BE CHECKED WHEN THE OUTDOOR TEMPERATURE IS ABOVE 75°F.
AFTER OPERATING PRESSURES HAVE STABALIZED: MEASURE INDOOR WET BULB TEMP - OUTDOOR TEMP - LIQUID & SUCTION PRESSURES.
LOCATE OUTDOOR TEMP ① LOCATE INDOOR WET BULB ②FIND INTERSECTION OF OD TEMP & ID W.B. ③READ LIQUID OR SUCTION PRESSURE IN LEFT HAND COLUMN ④ (SELECT PROPER INDOOR CFM)

ACTUAL LIQUID PRESSURE SHOULD BE ± 10 PSIG OF CHART
SUCTION PRESSURE SHOULD BE ± 3 PSIG OF CHART

EXAMPLE: ①OUTDOOR TEMP. 85°F., ②INDOOR WET BULB 67°F.,
③LIQUID PRESSURE @ 1000 CFM = 230 PSIG ④
③SUCTION PRESSURE @ 1000 CFM = 72 PSIG ④

From Dwg. 21D144189 Rev. 0

ALTERNATE INDOOR UNITS

COOLING WITH CAPILLARY TUBES

INDOOR UNIT	CFM	CORR. PRESS. S	CORR. PRESS. L
BXA030A200A	1000	−1	−2
BXA730D200A	1000	−1	−2
BXA036A200A	1125	1	2
BXA736M2HPA	1125	0	0
BXA736D200A	1125	2	4
BXF036A200A	1125	2	4
BWU030A100A	1000	0	0
BWU030A10NC	1000	−1	−2
BXV724A100E	900	−3	−6
BWH730A100A	1000	0	0
BWV030A100E	1000	0	0
BWV730A100E	1000	0	0
BWH736A100A	1125	3	6
BWV036A100E	1125	3	6
BWV736A100E	1125	3	6
BXV736A100E	1125	3	6

COOLING WITH FCCV

TXC030B4HPA*	1000	0	0
TXF030A4HPA	1000	−1	−2
TXF730A4HPA	1000	−2	−4
TXF036A4HPA	1125	1	2
TXF736A4HPA	1125	1	2
TXF024A4HPA	900	−4	−8
TXF724A4HPA	900	−5	−10
TXC024A4HPA	900	−2	−4
TXS024A4HPA	900	−2	−4
TXS724A4HPA	900	−3	−6
TXC025A4HPA	900	−2	−4
TXA025A4HPA	900	−2	−4
TXA025B4HPA	900	−2	−4
TXA725A4HPA	900	−2	−4
TXM725A4HPA	900	−2	−4
TXC030A4HPA	1000	0	0
TXA030A4HPA	1000	0	0
TXA030B4HPA	1000	0	0
TXA730A4HPA	1000	0	0
TXC036B4HPA	1125	3	6
TXC036A4HPA	1125	2	4
TXA036A4HPA	1125	2	4
TXA736A4HPA	1125	2	4
TXM736A4HPA	1125	2	4
TXC042A4HPA	1125	4	8
TXA042A4HPA	1125	4	8
TXA742A4HPA	1125	3	6
TXC742A4HPA	1125	3	6
TXC725A4HPA	900	−2	−4
TXC025B4HPA	900	−2	−4
TXA725B4HPA	900	−3	−6
TXC725B4HPA	900	−3	−6
TXM725B4HPA	900	−3	−6
TXC730A4HPA	1000	0	0
TXC730B4HPA	1000	0	0
TXA730B4HPA	1000	0	0
TXC736A4HPA	1125	2	4
TXA036B4HPA	1125	3	6
TXA736B4HPA	1125	2	4
TXC736B4HPA	1125	2	4
TXM736B4HPA	1125	2	4
TXV725B4HPA	900	−3	−6
TXV736B4HPA	1125	3	6
TWV025A140A	900	−3	−6
TWV725A140A	900	−3	−6
TWV030A140A	1000	0	0
TWV730A140A	1000	0	0
TWV036A140A	1125	3	6
TWV736A140A	1125	3	6
TWV042A140A	1125	4	8
TWV742A140A	1125	4	8
TWH024A140A	900	−3	−6
TWH724A140A	900	−3	−6
TWH030A140A	1000	0	0
TWH730A140A	1000	0	0
TWH036A140A	1125	3	6
TWH736A140A	1125	3	6
TWH042A140A	1125	4	8
TWH742A140A	1125	4	8

COOLING WITH TXV

BXA724P3HPA	900	−2	−4
BXF724P3HPA	900	−4	−8
BXA730P3HPA	1000	−2	−4
BXA736P3HPA	1125	1	2
BXF736P3HPA	1125	3	6
BXA742P3HPA	1125	2	4
TXC730P3HPA	1000	2	4
TXC730P5HPB	1000	2	4
TXC736P3HPA	1125	5	10
TXC736S5HPA	1125	8	16
BWU030B10NA	1000	−1	−2
BWH724P100A	900	−3	−6
BWH030P100A	1000	0	0
BWV724P100E	900	−3	−6
BWV030P100E*	1000	0	0
BWH736P100A	1125	3	6
BWH739P100A	1125	4	8
TWH739P100A	1125	9	18
TWV739E100A	1030	8	16
BWV739P100B	1125	4	8
TWV739P100A	1125	9	18
BWV736P100E	1125	3	6
BWH742P100A	1125	4	8
BWH742P100A	1125	4	8
TWH739E150A	1030	8	16
TWV739E150A	1030	8	16
TWV739P150B	1125	9	18
TWH739P150B	1125	9	18

*BASE INDOOR UNIT FOR COOLING CURVES ON DRAWING 21D144189 Rev. 0

S - Suction L - Liquid

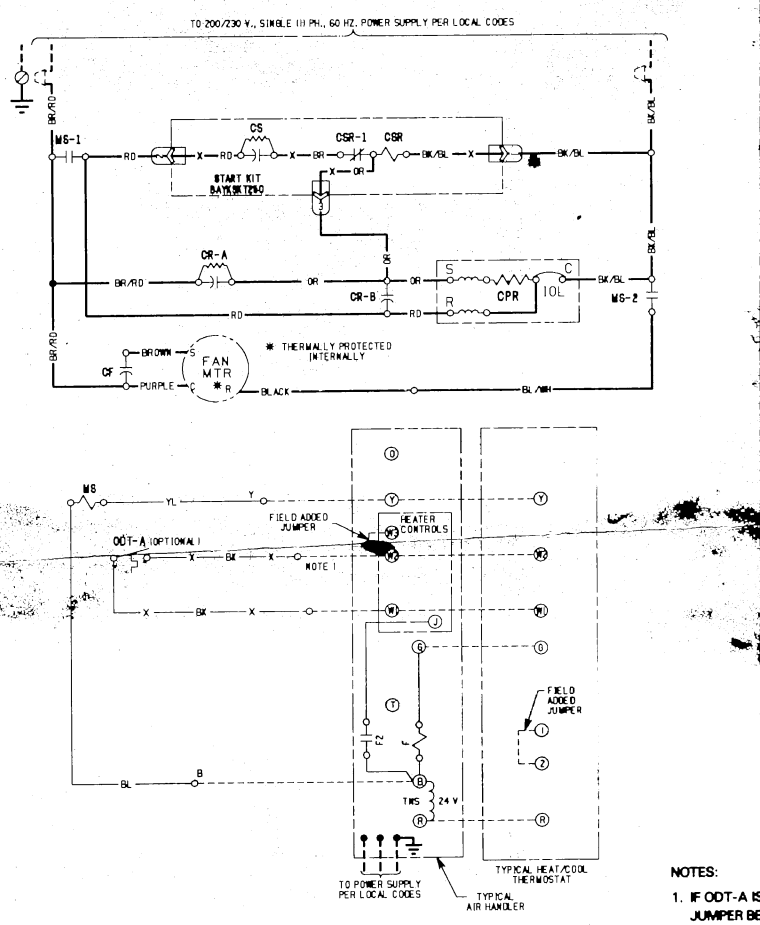
NOTE: Pressure corrections are the same when cooling with FCCV or the optional TXV kit, but use corresponding curves.

From Dwg. 21A144189 Rev. 0

REDDI PARTS

COMPONENT	QTY.	DESCRIPTION	CAT. #
Capacitors (CF) (CRA) (CR-B)	1 1 1	5 MFD, 370 V 30 MFD, 440V 10 MFD, 440V	WG20X0026 WW20X0130 WW20X0128
Coil, OD	1	Replacement	WW88X0433
Compressor Internal Line Break (IOL) Internal Press. Relief (IPR)	1	BH323-EF1: FLA 17.9 LRA 69.0, Wind. res. @ 77°F: Start 2.84 Ohms — Run .948 Ohms Open on rise in winding temp. - Resets in 30-90 min. Open on 350# diff. between high & low side pressure	Order by unit model #
Contactor (MS)	1	Type DPST, Contacts 240V, FLA 25.0, LRA 125.0, Coils 24V, .95 A.In., .53 A.Hld.	WW24X0138
Drier	1	Liq. Line w/Sweat Fit., 8 Cu. In., 3/8"x3/8"	WW22X0088
Drier	1	Suc. Line w/Sweat Fit., 30 Cu. In., ¾" x ¾"	WW22X0138
Fan	1	3 Blade, 18" Dia., 1/2" Bore, CCW Hub Down 29°	WW73X0100
Motor	1	200/230V, 60 Hz., 1 Ph., Closed Shell, 1075 RPM, 1/5 HP, 1-speed, FLA 1.6, LRA 3.2, Sleeve Bearings, CCW.	WW94X0482
Restrictor	1	Restrictor .065	WW62X0165

SCHEMATIC DIAGRAM

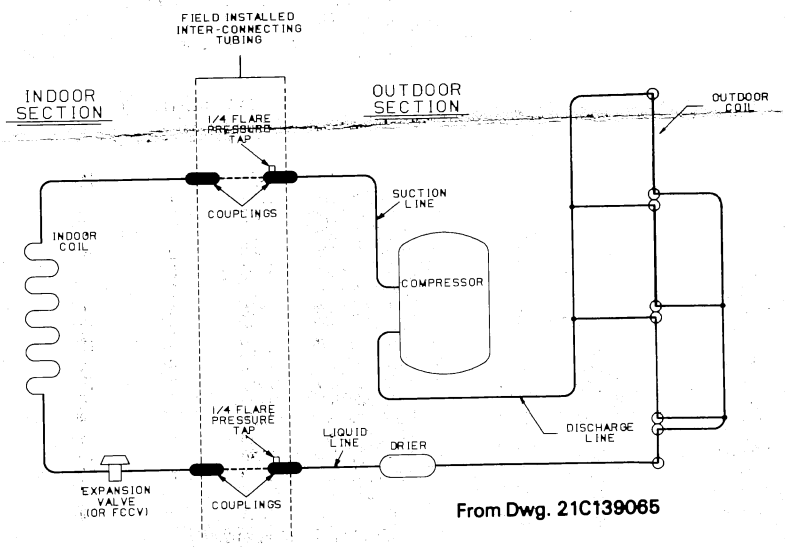


NOTES:

1. IF ODT-A IS
JUMPER BE
2. LOW VOLT
3. USE COPPE
WIRING IS
ACCEPTAB
USED.
4. TO DISCON
MS-L1 TO

From Dwg. 21D140812 P01

REFRIGERANT CIRCUIT



From Dwg. 21C139065

TROUBLESHOOTING CHART

SYSTEM FAULTS	HIGH VOLTAGE POWER SUPPLY	HIGH VOLTAGE WIRING	COMPR. IOL	RUN CAPACITOR	START CAPACITOR	CONTACTOR START-RELAY	LOW VOLTAGE CONTACTS	CONTROL TRANSFORMER	CONT
REFRIGERANT CIRCUIT									
Liquid Pressure Too High									
Liquid Pressure Too Low									
Suction Pressure Too High									
Suction Pressure Too Low									
Liquid Refrig. Floodback TXV System									
Liquid Refrig. Floodback Capillary Tube System									
I.D. Coil Frosting									
Compressor Runs Inadequate or No Cooling									
ELECTRICAL									
Compressor & O.D. Fan Do Not Start	P	P							S
Compressor Will Not Start But O.D. Fan Runs		P	S	P	P	P			
O.D. Fan Won't Start		P		P					
Compressor Hums But Won't Start		P		P	P	P	P	S	
Compressor Cycles on IOL		P	S	P	P	P	P	S	
I.D. Blower Won't Start	P	S							S

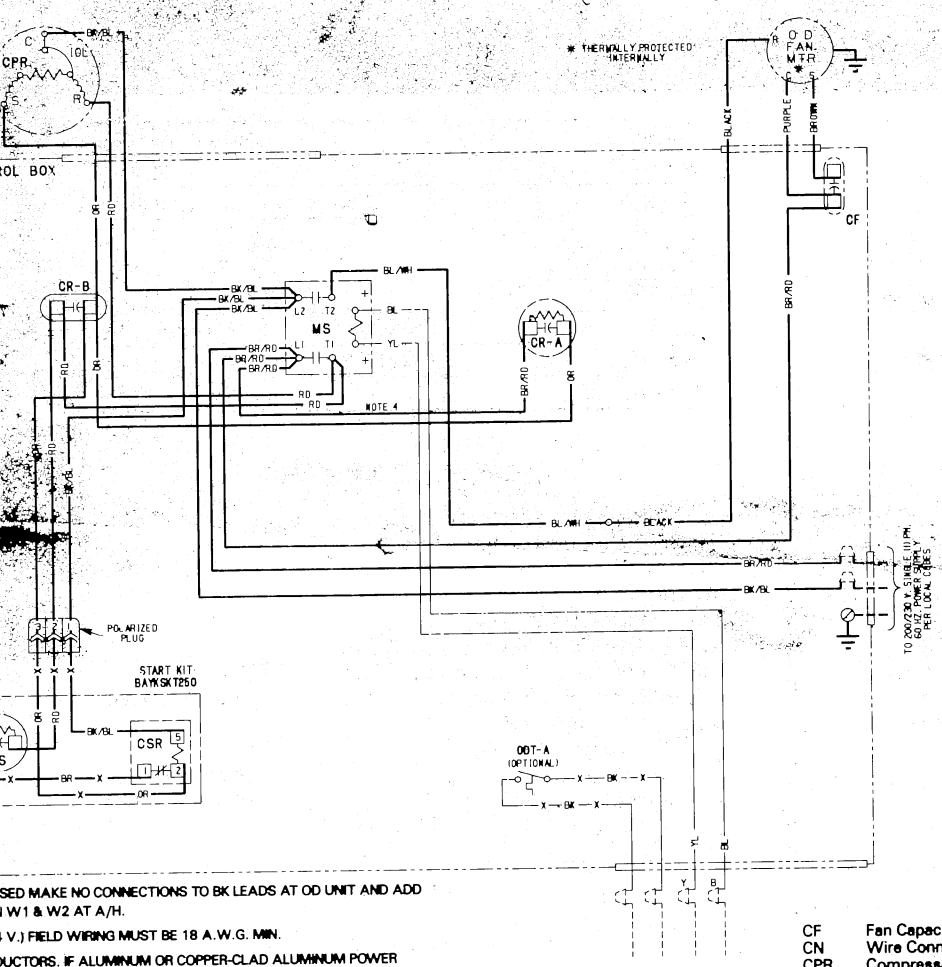
P-Primary Causes S-Secondary Causes

SERVICE TIPS

On this and other cooling only machines high side pressure is taken downstream of the condenser and liquid line drier. In the event of a restriction of either of these two components, charge can be added to cause the high side press to agree with the performance chart. However, discharge pressure becomes significantly higher, possibly causing the IPR to trip.

30B100A1

WIRING DIAGRAM



SED MAKE NO CONNECTIONS TO BK LEADS AT OD UNIT AND ADD
W1 & W2 AT A/H.

V.) FIELD WIRING MUST BE 18 A.W.G. MIN.

DUCTORS. IF ALUMINUM OR COPPER-CLAD ALUMINUM POWER
CONNECTORS WHICH MEET ALL APPLICABLE CODES AND ARE
HE INSPECTION AUTHORITY HAVING JURISDICTION SHALL BE

PTIONAL SUMP HEAT, MOVE BR/RD LEAD (FROM CR-A) FROM

LEGEND

SYMBOLS

- 24 V. } Factory Wiring / Line V.
- 24 V. } Field Wiring / Line V.
- Field Installed Factory Wiring
- Ground
- Junction
- Wire Nut or Connector
- Coil
- Capacitor
- Relay Contact (N.O.)
- Relay Contact (N.C.)
- Relay Contact (SPDT)
- Thermistor
- Internal Overload Protector
- Temp. Actuated Switch
- Switchover Valve Solenoid
- Resistor or Heating Element
- Motor Winding
- Terminal
- Terminal Board
- Diode
- Pol. Plug Female Housing (Male Terminals)
- Pol. Plug Male Housing (Female Terminals)
- Light

COLOR CODES

BK/BL — COLOR OF WIRE: Black Wire with Blue Marker; COLOR OF MARKER

BK	Black	OR	Orange	YL	Yellow
BL	Blue	RD	Red	GR	Green
BR	Brown	WH	White	PR	Purple

CF	Fan Capacitor	IOL	Internal Overload Protector
CN	Wire Connector	MS	Compressor Motor Contactor
CPR	Compressor	OFT	Outdoor Fan Thermostat
CR	Run Capacitor	ODT	Outdoor Thermostat
CS	Starting Capacitor	TDL	Discharge Line Thermostat
CSR	Capacitor Switching Relay	TNS	Transformer

- WHAT TO CHECK

REF. CIRCUIT RESTRICTIONS	RESTRICTED I.D. AIRFLOW	SUPERHEAT	TXV STUCK OPEN	O.D. AIR RECIRCULATION	RESTRICTED O.D. AIRFLOW	NON-CONDENSABLES	EXCESSIVE EVAP. LOAD	REFRIGERANT OVERCHARGE	REFRIGERANT UNDERCHARGE	INEFFICIENT COMPRESSOR
S						P				
S	S							S	P	
S							P	P	S	
S	P	S								
							S			

SINGLE SPEED HEATPUMP

LEGEND-EQUIPMENT DIAGRAM

24 V. / LINE V. } FACTORY WIRING

24 V. / LINE V. } FIELD WIRING

—X— FIELD INSTALLED FACTORY WIRING

GROUND

● JUNCTION

○ TERMINAL

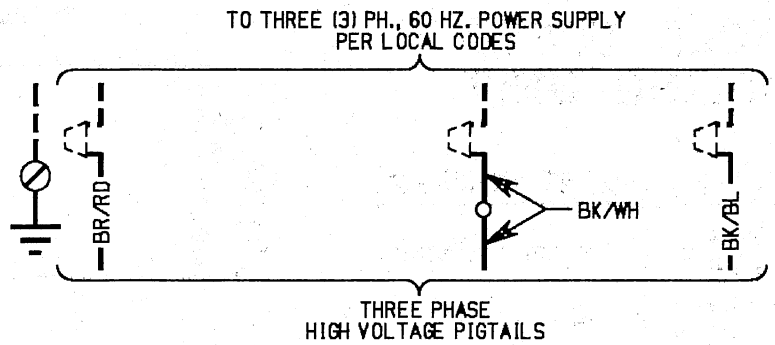
WIRE NUT OR CONNECTOR

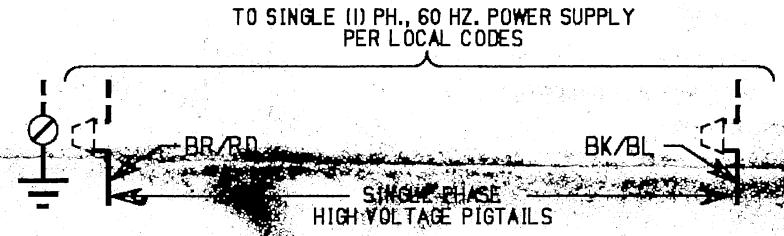
COLOR OF WIRE

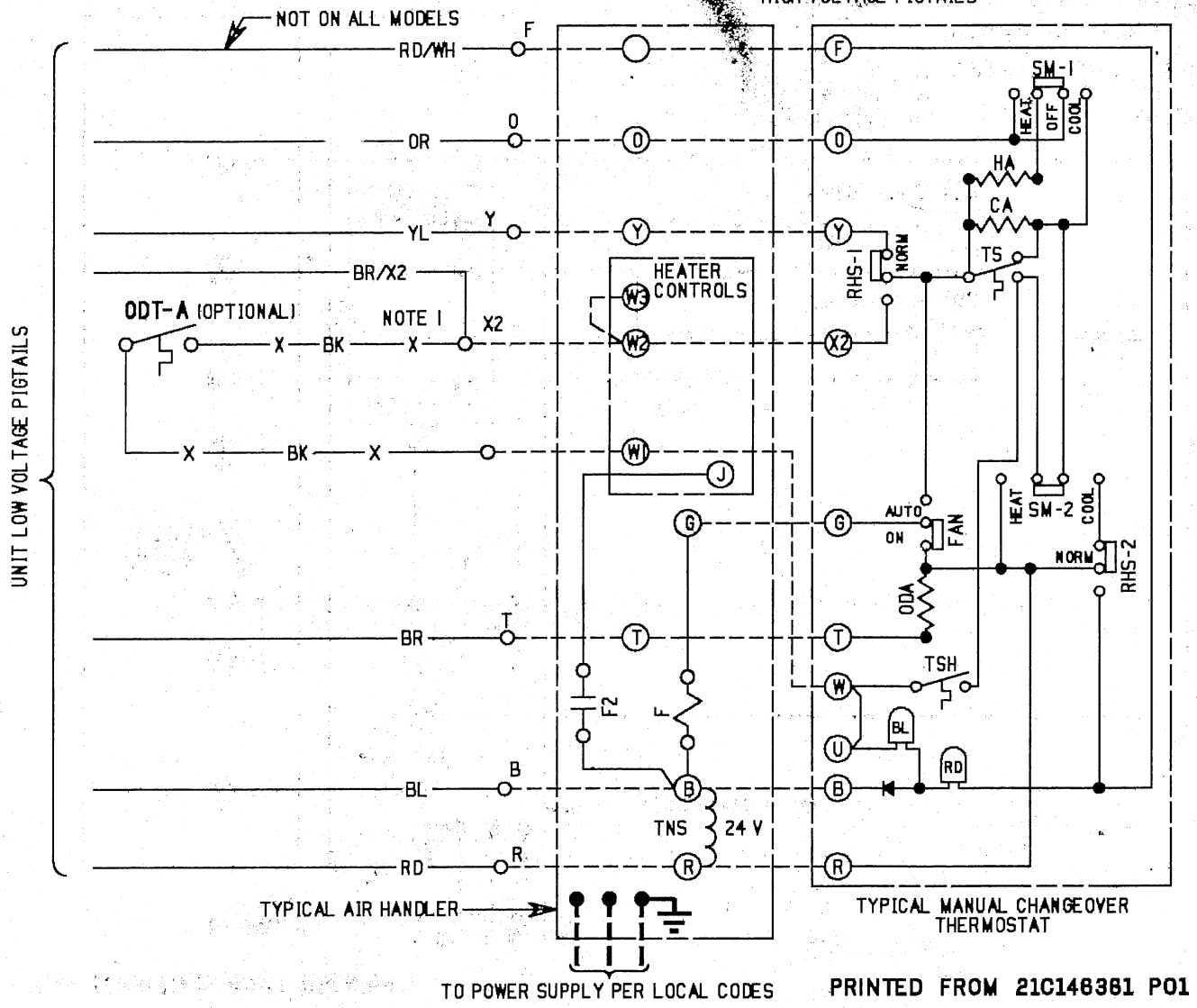
BK/BL BLACK WIRE WITH BLUE MARKER

COLOR OF MARKER

BK	BLACK	OR	ORANGE	YL	YELLOW
BL	BLUE	RD	RED	GR	GREEN
BR	BROWN	WH	WHITE	PR	PURPLE







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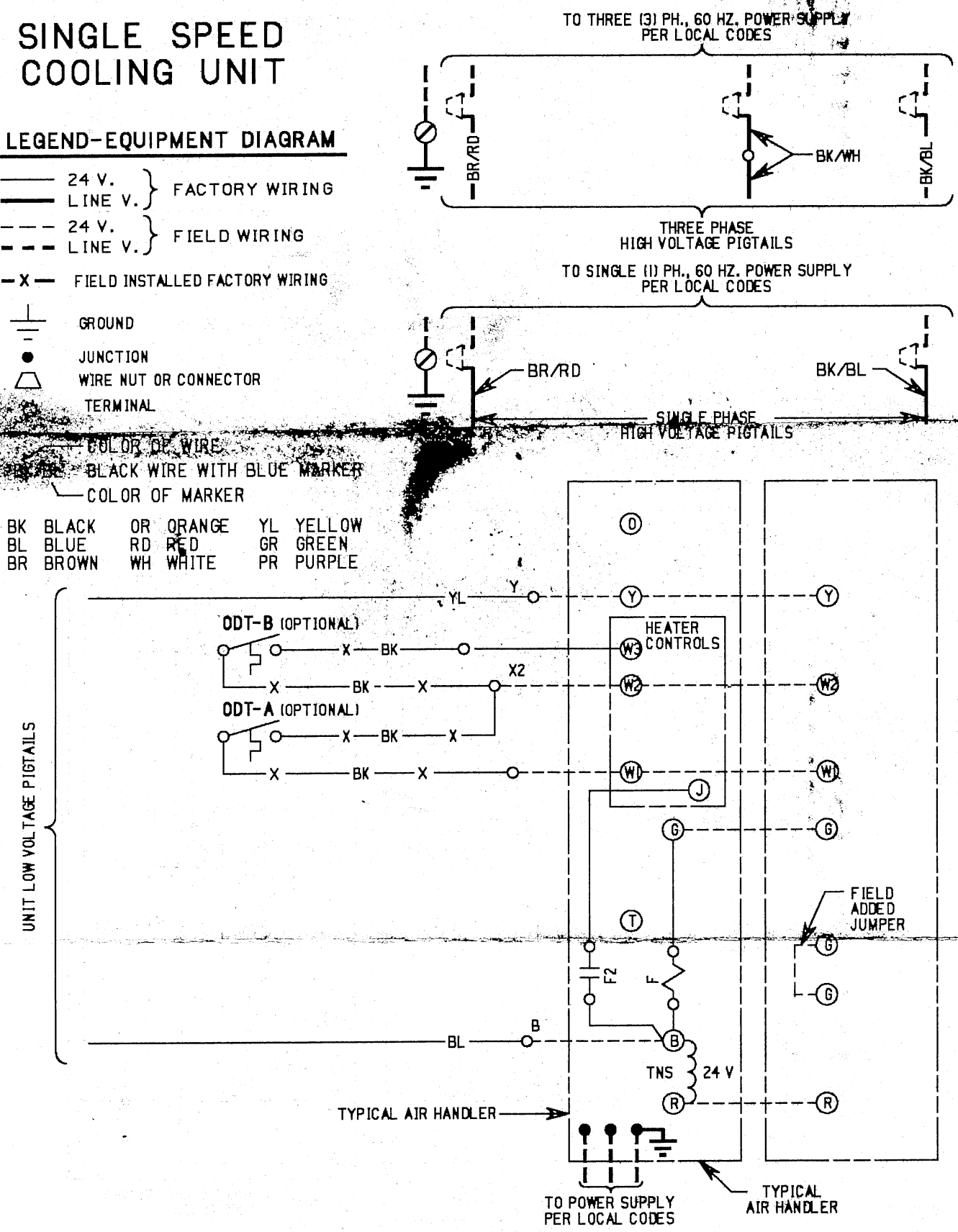
SINGLE SPEED COOLING UNIT

LEGEND-EQUIPMENT DIAGRAM

24 V. / LINE V.	FACTORY WIRING
24 V. / LINE V.	FIELD WIRING
—X—	FIELD INSTALLED FACTORY WIRING
	GROUND
	JUNCTION
	WIRE NUT OR CONNECTOR
	TERMINAL

COLOR OF WIRE
BLACK WIRE WITH BLUE MARKER
COLOR OF MARKER

BK	BLACK	OR	ORANGE	YL	YELLOW
BL	BLUE	RD	RED	GR	GREEN
BR	BROWN	WH	WHITE	PR	PURPLE



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